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OFFICIALDocket No.: H0002992
(PATENT)**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**In re Patent Application of:
Hoki Kwon****Customer No.: 000128****Application No.: 10/078,473****Confirmation No.: 4854****Filed: February 21, 2002****Art Unit: 2828****For: CARBON DOPED GAASSB TUNNEL
JUNCTION FOR THE APPLICATION OF
LONG-WAVELENGTH (1.3-1.55UM)
VCSEL**

Examiner: Dung T. Nguyen**INFORMATION DISCLOSURE STATEMENT (IDS)****Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450****Dear Sir:**

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed more than three months after the U.S. filing date, OR more than three months after the date of entry of the national stage of a PCT application, AND after the mailing date of the first Office Action on the merits, whichever occurs first, but before the mailing date of a Final Office Action or Notice of Allowance (37 CFR 1.97(c)).

A copy of each non US patent references on the PTO/SB/08 is attached.

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material

DC:50260876.1

Application No.: 10/078,473

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Docket No.: H0002992

information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

Our check in the amount of \$180.00 covering the fee set forth in 37 CFR 1.17(p) is enclosed. The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 01-1125, under Order No. H0002992-US. A duplicate copy of this paper is enclosed.

Dated: February 5, 2004

Respectfully submitted,

By  42,766

Song K. Jung

Registration No.: 35,210

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DC:50260876.1

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PTO/SB-08A (04-03)

Approved for use 04-30-2003. OMB 0651-0031

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Substitute for form 1449A-PTO		COMPLETE IF KNOWN	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (USE AS MANY SHEETS AS NECESSARY)		Application Number	10/078,473
		Filing Date	2-21-02
		First Named Inventor	Ho Ki Kwon
		Art Unit	2828
		Examiner Name	Dung T. Nguyen
		Attorney Docket Number	H0002992

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (If known)			
		US 4445218		04-24-1984	Coldren	
		US 4608597		08-26-1986	Coldren	
		US 4622672		11-11-1986	Coldren et al.	
		US 4829347		05-09-1989	Cheng et al.	
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		US 5243622	A	09-14-1993	Jewell et al.	
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Examiner Signature		Date Considered	
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EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.01. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

PTO/SB/08A (04-03)

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Substitute for form 1449B-PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (USE AS MANY SHEETS AS NECESSARY). Sheet <u>2</u> of <u>8</u>		COMPLETE IF KNOWN	
		Application Number	10/078,473
		Filing Date	2-21-02
		First Named Inventor	Ho Ki Kwon
		Group Art Unit	2828
		Examiner Name	Dung T. Nguyen
		Attorney Docket Number	H0002992

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	Application Number	10/078,473
	Filing Date	2-21-02
	First Named Inventor	Ho Ki Kwon
	Group Art Unit	2828
	Examiner Name	Dung T. Nguyen
	Attorney Docket Number	H0002992

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	US 6628685	B1	09-30-2003	Chan-Long Shieh	
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	US 2003/0157739	A1	08-21-2003	Jiang et al.	
	US 2003/0231680	A1	12-18-2003	Dariusz Burak	

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	Application Number	10/078,473
	Filing Date	2-21-02
	First Named Inventor	Ho Ki Kwon
	Group Art Unit	2828
	Examiner Name	Dung T. Nguyen
	Attorney Docket Number	H0002992

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	T ²
		Country Code ³	Number ¹	Kind Code ² (if known)				
		EP	0 740 377	A1	10-30-1998	Hewlett-Packard Company		
		EP	0 740 377	B	10-30-1998	Hewlett-Packard Company		
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		EP	0 999 621	B1	11-04-1999	Jayaraman et al.		
		EP	1 294 063	A1	03-19-2003	Avalon Photonics AG		
		JP	57026492	A	02-12-1982	NEC Corp.		
		WO	98/007218	A1	02-18-1998	W.L. Gore & Associates, Inc.		
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		WO	00/052789	A2	02-29-2000	The Regents of the University of California		
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		WO	00/065700	A2	11-02-2000	Gore Enterprise Holdings, Inc.		
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		WO	01/016642	A2	03-08-2001	Agility Communications		
		WO	01/016642	A3	03-08-2001	Agility Communications		
		WO	01/017076	A2	03-08-2001	The Regents of the University of California		

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INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

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Sheet 5 of 5

COMPLETE IF KNOWN

Application Number	10/078,473
Filing Date	2-21-02
First Named Inventor	Ho Ki Kwon
Group Art Unit	2828
Examiner Name	Dung T. Nguyen
Attorney Docket Number	H0002992

WO	01/017076	A3	03-08-2001	The Regents of the University of California		
WO	01/018919	A1	03-15-2001	The Regents of the University of California		
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WO	01/052373	A2	07-19-2001	Infineon Technologies Ag		
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WO	01/098756	A2	12-27-2001	The Regents of the University of California		
WO	02/003515	A2	01-10-2002	Agility Communications, Inc.		
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OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
		AKIYAMA, Y., et al., "Growth of High Quality GaAs Layers on Si Substrates by MOCVD", 1988, Journal of Crystal Growth, pp. 490-497.	
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	Application Number	10/078,473
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	First Named Inventor	Ho Ki Kwon
	Group Art Unit	2828
	Examiner Name	Dung T. Nguyen
	Attorney Docket Number	H0002992

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	Application Number	10/078,473
	Filing Date	2-21-02
	First Named Inventor	Ho KI Kwon
	Group Art Unit	2828
	Examiner Name	Dung T. Nguyen
	Attorney Docket Number	H0002992

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		Filing Date	2-21-02
		First Named Inventor	Ho Ki Kwon
		Group Art Unit	2828
		Examiner Name	Dung T. Nguyen
		Attorney Docket Number	H0002992
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Application Number	10/078, 473
Filing Date	2/21/2002
First Named Inventor	Ho Ki Kwon
Art Unit	2828
Examiner Name	Dung T. Nguyen.
Attorney Docket Number	H0002992

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code* (if known)			
		US 5,659,180	A	08-19-1997	Shen et al.	
		US 5,679,903		10-21-1997	Klem et al.	
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		US				
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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	Yes
		Country Code*	Number*	Kind Code* (if known)				
		WO	01/63708	A2	8-30-2001	Boucatt et al.		X
		EP	0 715 357	A1	6-5-1998	McDermott		X
								X

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